

California HIV/AIDS Update



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Community-Based HIV/STD Prevention Interventions Among a Community of Migrant Farm Workers in California

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Introduction

Government agencies have no uniform definition of migrant farm workers (MFWs). For this study we used the U.S. Department of Health and Human Services definition for Migrant Health Services Programs: "migratory agricultural worker means an individual whose principal employment is in agriculture on a seasonal basis, who has been so employed within the last 24 months, and who establishes for the purpose of such employment a temporary place of abode."¹

The federal Office of Migrant Health estimates that of the three million migrant and seasonal farm workers and dependents in the U.S., one million are migrants.³ Other estimates of migrant farm workers and their dependents range from 317,000 to 1,500,000.¹ Of the three migrant streams in the U.S., one is based in California and

Arizona and covers all Western states. Over 90% of these migrants are Hispanic, mainly Mexicans, Mexican-Americans, and Central Americans.² California's migrant labor force and their dependents is estimated to be between 600,000 and 1,100,000 and 28% of this labor force is made up of women.⁴

Little is known about the impact of HIV and sexually transmitted diseases (STDs) among MFWs. The MFW community is often neglected in relation to HIV/STD prevention information and infected workers bring HIV/STD infections with them when they return to their native countries. A 1993 study of migrant and seasonal farm workers by the National Commission to Prevent Infant Mortality found that:

1) MFWs are contracting HIV in significant numbers, and the rates of infection appear to be increasing; 2) risk factors include sex with multiple partners, alcohol use, and both licit and illicit drug use; and 3) MFWs tend not to use local medical facilities due to isolation, fear, lack of knowledge, and language barriers.³ A study conducted in Orange County, California found that the most frequent sexual activity for male MFWs was with prostitutes, many of whom were HIV-infected because of intravenous heroin use.⁶ A 1994 study conducted in Northern California found that male MFWs reported an average of 1.8 sex partners in the previous 6 to 12 months; 38.5% had ever paid someone for sex; and only 30.8% used a condom.⁷ Another study found that alcohol use may be an antecedent to, or co-occurring factor with, risky sexual behaviors.⁸ Among MFWs in that study, 68.9% identified use of alcohol as the leading problem among their friends.

MFWs are medically underserved, with less than 15% of the estimated population able to access primary care services.⁹ Community-based interventions can reach large numbers of high-risk individuals, build community and self esteem, and reduce HIV risk behaviors. In addition to MFWs, community-based interventions can also target social groups with which MFWs interact on a daily basis. Other researchers have demonstrated that community-based interventions can produce short-term behavior change and that brief skills training can maintain behavior change.¹⁰

The purpose of this study was 1) to develop and evaluate theory-driven, community-based HIV/STD prevention interventions in a community of MFWs in San Joaquin County, California, and 2) to develop recommendations for community-based health promotion among MFWs.

Methods

The study protocol was reviewed and approved by the California Health and Welfare Agency, Committee for the Protection of Human Subjects.

The California Department of Health Services, Office of AIDS (OA), in collaboration with the California Primary Care Association (CPCA), selected a MFW community for this study based on the following criteria: 1) size of the migrant farm worker community; 2) number of different farms/ranches within the community; 3) degree of community isolation; 4) availability of local media; 5) amount of time during which the migrant farm worker community is stable; 6) receptiveness of community leaders to the project; 7) cooperative

relationship between the Migrant Health Centers (MHCs) and the local public health agency; and 8) availability of HIV/STD testing services.

We selected one MHC to assist with the study in San Joaquin County: Community Medical Centers, Inc. The study population consisted of all male and female MFWs or their dependents, aged 18 and over, who were employed in San Joaquin County. The study was conducted from June 30, 1997 through September 30, 1997 in San Joaquin County.

We conducted the formative research in two phases. In Phase I, community coordination, the MHC identified and invited community leaders and representatives from different agencies to participate in a breakfast meeting with CPCA and OA's principal investigators. The purpose of this meeting was to determine potential intervention strategies and available community resources and to build community support for the project. Phase II involved proposed strategy verification. Prior to administering a pre-intervention survey and implementing the intervention, we collected data from members of the target population to test the assumptions and decisions made in Phase I. Focus group meetings with members of the target population allowed us to identify opinion leaders, determine media-use behaviors, and determine whether developed media messages and pre-intervention survey questions were accepted and interpreted as anticipated. We held one focus group meeting with male MFWs and one with female MFWs. We provided lunch and an incentive payment of \$10 as a thank-you for their time and participation.

The outcome evaluation design of this study involved three parts: a data collection instrument, pre- and post-intervention surveys, and an intervention. OA's principal investigators developed the data collection instrument in collaboration with CPCA and the MHC. This field interview addressed basic information about the person's background and emotional situation. Specific sexual behavior questions included having sex with someone of same sex, vaginal sex, anal sex, and sex with a prostitute. Drug injection questions assessed sharing and cleaning of syringes or needles. The instrument also assessed knowledge of HIV/STD transmission and barriers to condom usage. The last section of the interview assessed how MFWs make decisions related to HIV/STDs. The interviews were conducted in Spanish.

Trained community outreach workers with experience working with this population administered the pre- and post-intervention survey to

approximately 150 MFWs. The post-intervention questionnaire included four additional questions concerning whether the participant had heard or seen anything about HIV/AIDS/STD in the previous 30 days, where s/he had heard or seen this information, whether the participant had changed her/his behaviors because of HIV/AIDS/STD, and whether the participant had completed this questionnaire before. MFWs who completed the pre- and/or post-intervention survey gave written informed consent and received \$5 as a thank-you for their time.

Given the migratory nature of the study population, the intervention was planned to occur within a period of approximately four weeks. The purpose of the intervention was twofold: 1) to increase community support of the behaviors known to reduce the risk for HIV/STD infections and transmissions, and 2) to change community norms.

Several interventions were implemented in San Joaquin County. Between August 18, 1997, and September 4, 1997, community outreach workers conducted four small group presentations at different camp sites in Lodi, Acampo, and Linden. A total of 142 migrant farm workers participated in these presentations.

Two community events were also held in Lodi. At the "Feria del Trabajador" fair community outreach workers provided one-on-one HIV/STD education and prevention messages to approximately 74 MFWs. All participants were offered free and confidential HIV counseling and testing. At the "Gran Baile" event at the Eagle's Lodge, a total of 92 MFWs enjoyed free soft drinks, sandwiches and music. During the band's breaks, MFWs participated

in raffles. Participants whose raffle numbers were called would go to the main stage and answer a question related to HIV/AIDS/STD. If their response was correct, they received a prize. If their response was incorrect, they were given the correct response and asked to repeat it and if correct they also received a prize. At the entrance to the lodge, community outreach workers displayed free educational materials and condoms. The local health department was also available to offer free and confidential HIV counseling and testing.

In addition to small group and community level

Table 1. Demographic Characteristics of Pre- and Post-Intervention Samples

Characteristic	Pre-Intervention Sample (n= 154)	Post-Intervention Sample (n= 150)	p-value
Gender			
Male	66.2%	64.0%	0.68 ¹
Female	33.8%	36.0%	
Age (years)	33.4	32.0	0.10 ²
Race/Ethnicity			
Latinas/os	100.0%	100.0%	
Country of Birth			
Mexico	93.5%	97.3%	
United States	5.8%	2.7%	
Peru	0.6%	0.0%	
Months in the U.S.	147.4	134.4	0.07 ²
Language spoken at home			
Spanish	99.4%	100.0%	
English	0.6%	0.0%	
Marital Status			
Married/spouse travels with you	55.6%	67.3%	0.12 ¹
Married/spouse stays in home country	10.5%	7.3%	
Separated/Divorced/Widowed	7.2%	2.0%	
Single/Never married	24.2%	20.7%	
Member of unmarried couple	2.6%	2.7%	
Education			
Never attended school	6.5%	2.0%	0.06 ¹
Primary school	59.1%	54.0%	
Secondary school	29.2%	40.7%	
Preparatory	5.2%	3.3%	
Monthly Income			
Pay for living expenses/save \$\$\$	24.3%	24.8%	0.25 ¹
Pay for living expenses/cannot save	57.9%	67.8%	
Cannot pay for living expenses, have problems.	11.8%	6.7%	
Have serious economic problems	2.0%	0.7%	

¹ p-values for Pearson Chi-squares.

² p-values for t-tests for independent samples

presentations, community outreach workers provided one-on-one education sessions to approximately 105 MFWs. During these sessions, MFWs received pamphlets, condoms, and instruction on correct condom use.

Finally, staff from the MHC and other guest speakers from the local health department participated in live radio and television programs targeting MFWs.

Statistical analyses of survey data were conducted using SPSS and Epi Info version 6.0. Frequency distributions for pre- and post-intervention surveys were compared using chi-square tests for independent samples.

Results

The pre- and post-intervention samples did not differ significantly in any demographic characteristics studied. The majority of MFWs were male (66.2% and 64.0%) in their early to mid-thirties. All participants were Latinas/os; most were born in Mexico (93.5% and 97.3%) and spoke Spanish at home (99.4% and 100.0%). More than half of the participants were married and their spouses traveled with them (55.2% and 67.3%). Most had completed primary school (59.1% and 54.0%) and were able to pay for living expenses but could not save money (57.9% and 67.8%) (Table 1).

The majority of MFWs had been exposed to at least one HIV/AIDS/STD-related message during the one-month intervention period. Most (64.7%) received messages from an outreach worker, followed by television (60.7%), and a brochure (33.3%). Only 26% (n= 39) of MFWs surveyed had participated in both surveys (Table 2). MFWs participating in the post-intervention survey demonstrated more accurate knowledge of HIV-related transmission, risk behaviors, and medical issues (Table 3).

Discussion

This study found that community-based interventions are an effective means of reaching MFWs who are at high risk for HIV or other STDs. This community-based intervention allowed us not only to target MFWs but also the social groups with which these individuals interact on a daily basis. Based on discussions held with focus groups, small groups, and one-on-one, HIV/STD prevention strategies using a variety of interpersonal and media messages can reduce

risk behavior in the short term and eventually reduce new HIV/STD infections. A participating female MFW stated "knowledge is the best weapon that can help you to protect yourself."

Much work remains to complete our understanding of the dynamics of HIV/STD transmission among MFWs.

Innovative community-based interventions that are likely to be effective for MFWs need to be developed.

Further study must evaluate whether these interventions can reduce risk behavior on a long-term basis. Future interventions among MFWs need to emphasize specific risk behaviors such as alcohol use, lack of condom use, and self-injecting practices. Participating communities need to involve members of the target population in planning and implementing interventions. They also need to collaborate with local government officials and state and federal agencies.

Interpretations of the results of this community-based intervention among MFWs in San Joaquin County are subject to limitations. This study included only selected geographic areas within San Joaquin County where MFWs were accessible. Therefore, we cannot be certain if the characteristics of MFWs included in this study are generalizable to all MFWs in San Joaquin County, other areas of California, or other states. Data collection methods included convenience sampling. Therefore, the pre- and post-intervention samples may not be representative of the at-risk MFWs in this community. Data collected on sexual, drug-using, and condom-using behaviors rely on self-report.

Despite these limitations, the data indicate that community-based interventions among MFWs can successfully contribute to behavior change. MFWs responded positively to risk reduction messages and the community level approach to reducing risk behaviors.

Table 2. Post-Intervention Measures of Exposure to HIV Messages During Intervention

Measures of Exposure	Percent (%) YES
In the last 30 days, did you see or hear anything about HIV/AIDS/STD?	94.6
Where did you see or hear something about HIV/AIDS/STD?	
Outreach Worker	64.7
Television	60.7
Brochure	33.3
Radio	16.7
Friends or family	10.0
Poster	8.7
Have you completed this questionnaire before?	26.0

Table 3. HIV Knowledge Measures of Pre- and Post-Intervention Samples

Knowledge Measures	Pre-Intervention Sample (% TRUE)	Post-Intervention Sample (% TRUE)	p-value ¹
The virus that causes AIDS can be transmitted by:			
Kissing	42.3	17.9	< .001
Having anal sex without a condom	90.1	100.0	< .001
Having vaginal sex without a condom	94.2	99.3	< .05
Coughing	19.0	2.0	< .001
Mosquito, cockroach or bedbug bites	54.9	21.8	< .001
Using public baths	28.9	7.4	< .001
Sharing syringes or needles	90.9	98.0	< .05
Sharing showers	21.4	3.4	< .001
Going to a prostitute and not using condoms	93.7	100.0	< .05
Oral sex (penis in mouth)	73.4	97.3	< .001
Eating the same foods with a person with AIDS	28.1	12.7	< .05
An IDU who shares syringes/needles to his/her spouse through sex	91.7	99.3	< .05
Injection drug use because HIV is found in heroin, amphetamines, or other drugs	66.7	43.2	< .001
A person infected with the AIDS virus:			
Can look healthy	42.7	87.8	< .001
Is easily identified	44.9	13.2	< .001
May not feel sick or know is infected	71.8	88.4	< .001
Is a homosexual	34.3	8.8	< .001
Can improve his/her health through medical treatment	76.9	93.3	< .001
Men who have sex only with women are not at risk of getting AIDS	21.1	1.3	< .001
AIDS can be a mortal disease, with no cure	96.5	100.0	< .05
Persons like you, who work in the fields, are not at risk of getting AIDS	36.7	12.8	< .001
Women who have sex only with men are not at risk of getting AIDS	18.3	4.7	< .001

¹ p-values for Pearson Chi-squares

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Overreporting of TB in California's AIDS Surveillance

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Background

The Centers for Disease Control and Prevention (CDC) first defined acquired immunodeficiency syndrome (AIDS) in 1982 by identifying opportunistic infections associated with the syndrome.^{1,2} The CDC established extrapulmonary tuberculosis (TB) as an AIDS-defining condition in 1987³ and added pulmonary TB as an AIDS-defining condition in 1993.⁴

TB is one of the few AIDS-defining conditions that is transmissible, preventable, and curable with proper treatment. As part of a CDC-funded project to better describe TB-AIDS patients, the Office of AIDS (OA) collected data on persons with AIDS and active TB diagnosed between 1991 and 1993. Using these data, we conducted a validation study of persons who were reported to the state AIDS Case Registry with AIDS and TB who did not match a known TB case. Our goal was to determine if these cases represented underreporting of TB cases to the TB registry or overreporting of TB in the AIDS surveillance system. This report summarizes the results of our investigation.

Methods

OA staff performed a computer match of all AIDS cases reported to the state AIDS Case Registry as of March 24, 1994 (n = 70,716) to verified TB cases counted by the state TB Registry from January 1985 through December 1993 (n = 37,612). County AIDS surveillance staff verified all possible matches for the study years 1991-93. AIDS cases with a diagnosis of pulmonary or extrapulmonary TB not matching to a counted TB case were termed "non-verified" cases and included in the validation study (n = 331). Cases were excluded if they resided in Los Angeles County (except for the Cities of Long Beach and Pasadena) because Los Angeles received separate funding to conduct TB-AIDS investigations.

For each non-verified case included in the study, county AIDS surveillance staff attempted to correct

the discrepancy between the AIDS and TB reporting systems. Subsequently, OA staff reviewed public health and medical records of the non-verified cases not validated by county staff, beginning with records in local TB control offices and proceeding to medical records in hospitals, clinics, physician offices, and correctional settings as needed. Eleven cases were subsequently excluded because they were duplicates of a matching case, were found to be a resident of Los Angeles County, or were found not to be a valid AIDS case. For the remaining 320 non-verified cases we classified the TB diagnosis as verified or not verified. For verified TB cases, we noted where and when the case was counted and why the patient had not matched in the computer match process. For cases in which TB was not verified, we identified if this was due to other culture results (other mycobacterial species), the patient not meeting the CDC clinical case definition for TB, data entry error, or other reasons. Additionally, we ascertained if the case would have met the AIDS case definition without the TB diagnosis.

Results

Of the 320 non-verified cases, data remained incomplete on 7 (2%) cases. The diagnosis of TB was verified for 66 (21%) cases and not verified for 247 (77%) cases. Five of the verified cases were counted as TB cases in other states and three were diagnosed with TB and began treatment in other countries. Two cases with verified TB were not previously known to the state TB Registry and thus represent unreported cases of TB. The remaining 56 verified cases among California residents were not identified in the initial matching process because of differences in the matching variables (n=31, 56%) or because the TB count date was outside the 1991-93 study period (n=23, 42%). For two cases we could not identify why they did not initially match. Table 1 summarizes the 247 cases without verified TB. Most (n=94, 34%) invalid TB classifications were due to a positive screen for acid-fast bacillus, of which TB is a type, but final

Table 1. Reasons for erroneous reports of a TB diagnosis in the California AIDS Case Registry, 1991-93

Reason	Number	Percent
Final culture identified other mycobacterial species ¹	84	34
<i>Mycobacterium tuberculosis</i> determined to be contaminant	1	0
Patient anergic	2	1
TB infection only (Class 2)	29	12
TB not clinically active (Class 4)	6	2
TB considered as part of work-up but ruled out	71	29
Data entry error on AIDS case report	20	8
Other ²	34	14
Total	247	100%

¹*Mycobacterium avium/intracellulare* (MAI or MAC), *Mycobacterium kansasii*, or others

²Includes: extensive review found no mention of TB in medical records (17); other microbial infections (4); and case name duplicates a verified TB case but is not same person (3).

culture results identified other mycobacterial species. The next largest group of invalid TB cases (n=71, 29%) was due to the care provider documenting that TB was considered in the diagnostic work-up but was eventually ruled out. Twenty-six (11%) of the non-verified TB cases would not have met the AIDS case definition without a TB diagnosis.

Discussion

Only two (0.6%) of the 320 non-verified TB cases were true cases of TB that were reported to the state AIDS Case Registry but not to the state TB registry. Assuming the matching cases (n=819) plus the two additional cases identified by this study represent all TB-AIDS cases during the period 1991-93, the completeness of the TB reporting system is 99.8% (819/821). This also assumes that the 7 non-verified cases without complete data forms and the 17 in which extensive medical review did not turn up evidence of TB (Table 1) did not have verified TB. Studies examining AIDS case reporting have found reporting to be 60-96% complete.⁵⁻⁹

This validation study also showed that TB diagnoses in the state AIDS Case Registry were overreported by approximately 30% ([819+247]/819) during the years 1991-93. Persons completing AIDS case reports should not report TB in AIDS cases until the local TB controller verifies the TB diagnosis and assigns a Report of a Verified Case of Tuberculosis (RVCT) number.

Reporting TB-AIDS Cases to the AIDS Case Registry

Complete and accurate reporting of TB to the state AIDS Case Registry requires that the person completing the AIDS case report know:

- ✓ the site of TB (pulmonary or extrapulmonary),
- ✓ the diagnostic classification (definitive or presumptive),
- ✓ the date of TB diagnosis (month/year of first positive culture or therapy start date), and
- ✓ the RVCT number for the TB case.

Table 2 shows the correct classification of a TB diagnosis (definitive or presumptive) on the AIDS case report form. In general, cases with specimens confirmed with *Mycobacterium tuberculosis* (MTB) or "TB Complex" are classified as definitively diagnosed; all other means of diagnosing TB would fall under presumptively diagnosed. We encourage AIDS surveillance staff and others who report AIDS cases to collaborate with local TB control staff in reporting TB

completely, accurately, and in a timely manner. Such collaboration will assist public health personnel in preventing cases of TB.

Table 2. Classification of TB Cases (Pulmonary and Extrapulmonary) on the AIDS Case Report Form

Criteria for TB Dx	Criteria for AIDS Dx	
	Definitive TB	Presumptive TB
Positive culture for <i>M. tb</i>	✓	
Positive smear for acid fast bacillus		✓
Clinical case definition only		✓
Physician diagnosis without other criteria		✓

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Temporal Trends in Survival after AIDS in California, 1985-1994

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A previous *Update* article presented 1992-1996 data on California AIDS deaths.¹ The numbers of deaths in 1996 were lower than the corresponding numbers in 1995; however, as noted in the article, "the statistical technique of survival analysis, not analysis of mortality trends, is most appropriate for determining whether or not survival has increased." This report analyzes temporal trends in survival after AIDS in California.

Methods

Data collection methods were outlined in the previous *Update* article.¹ We used a database of AIDS cases diagnosed 1985-1994 and reported to the California AIDS Case Registry as of December 31, 1997. For the analyses in this study, cases were grouped by age at diagnosis, mode of HIV exposure, race, or sex. For each group, we considered the cases diagnosed in a particular half-year to be a cohort.

Within each cohort, we calculated the Kaplan-Meier estimate of the survival distribution.² Based on this distribution, we obtained estimates of the 25th, 50th, and 75th survival percentiles. For example, the 25th survival percentile is the survival time t such that 25% of the survival times are less than t and 75% of the survival times are greater than t . The 50th percentile corresponds to the median survival time. By standard methods it is impossible to estimate, for example, the median survival until at least 50% of the cohort has died; for this reason, our survival analyses do not extend to very recent years. In the figures, data are shown only for cohorts that had at least 50% deaths.

Results

Figure 1 presents the 25th, 50th (median), and 75th survival percentiles based on all cases by date of diagnosis. All survival percentiles increased over time. This increase is particularly pronounced in the

half-years since the early 1990s. For cases diagnosed the first half of 1993, the median survival was 34 months, compared to 10 months for cases diagnosed in 1985.

Figures 2 through 5 show median survival estimates within groups defined by age at diagnosis, mode of HIV exposure, race, and sex. Individuals diagnosed after the age of 50 had markedly lower median survival for all half-years than individuals diagnosed at earlier ages (Figure 2). Furthermore, persons aged 0-24 at diagnosis had higher median survival than older persons beginning in 1988. In the first half of 1993, persons aged 0-24 at diagnosis had a median survival of 51 months, compared with 36 months for those aged 25-49 at diagnosis and 21 months for those 50 years or older at diagnosis.

There was no evidence for consistent differences in the median survival among cases by mode of exposure or by racial/ethnic group (Figures 3 and 4). Women had a lower median survival than men from the second half of 1986 through the first half of 1990 (Figure 5); however, between the second half of 1990 and the first half of 1993, women had a median survival greater than or equal to that of men. Analyses of the 25th and 75th estimated survival percentiles produced results similar to those for the median survivals.

Conclusions

One reason for the observed increase in survival after AIDS diagnosed in the 1990s is the introduction of highly active antiretroviral therapy (HAART). Studies suggest that HAART has increased the average duration between HIV and AIDS³ and the average duration between AIDS and death.⁴⁻⁷ On the other hand, our study is consistent with two other studies which found that increased survival after AIDS preceded the use of HAART.^{8,9}

Our study found that survival differs by age, which is consistent with a previous study.¹⁰ Muthambi et al.⁹ found that "heterosexuals and men who have sex with men fared slightly better than injecting drug users," which cannot be excluded by our data. On the other hand, the lack of difference in survival by racial/ethnic group is inconsistent with two previous studies.^{9,11} Studies do not routinely address temporal trends in survival by sex.

Our study had several limitations. First, we do not know whether cases were taking HAART. Second, we can calculate only survival since AIDS diagnosis, not since HIV diagnosis. Finally, we did not stratify by AIDS case definition or AIDS-indicator diseases. Further monitoring of survival trends is

necessary to determine the burden of HIV disease in California, and the effect of HIV/AIDS therapies such as HAART on a population basis.

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Figure 1. Estimated Survival Percentiles in Months After AIDS by Half-Year of Diagnosis -- California, 1985-1994

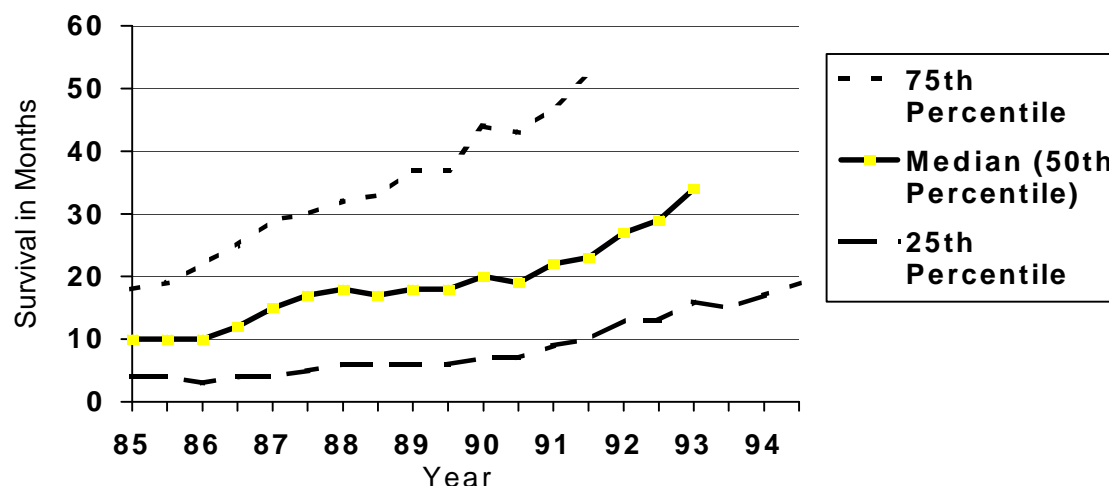


Figure 2. Estimated Median Survival in Months After AIDS by Half-Year of Diagnosis and Age Group -- California, 1985-1994

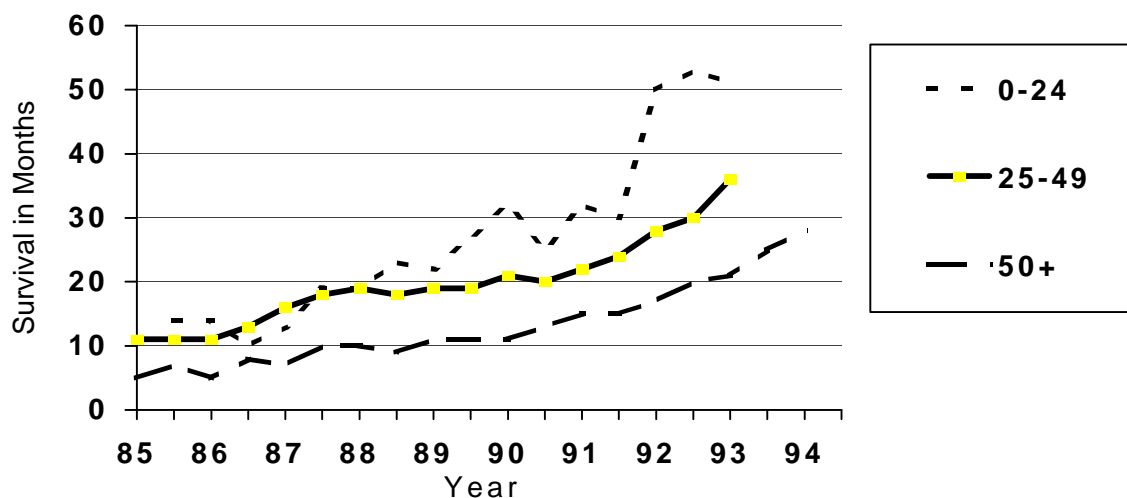
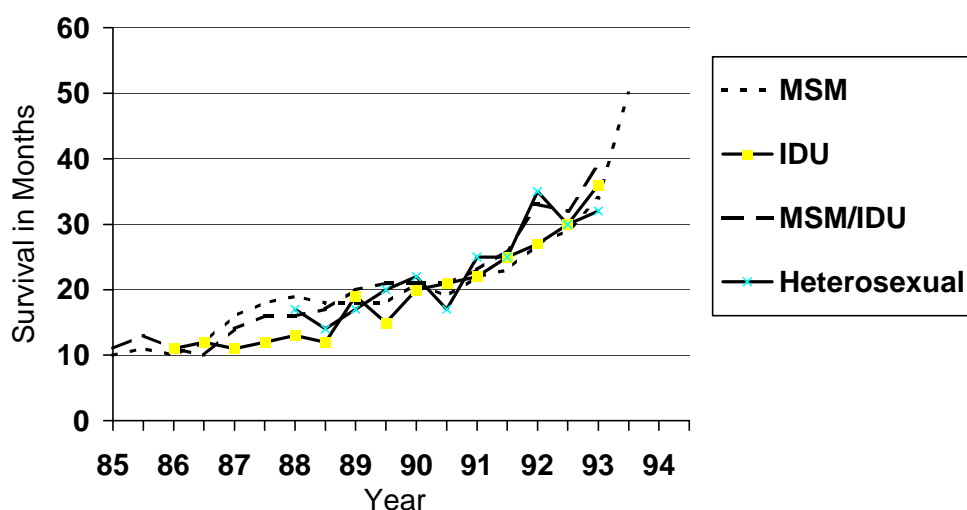


Figure 3. Estimated Median Survival in Months After AIDS by Half-Year of Diagnosis and Mode of Exposure -- California, 1985-1994



MSM=men who have sex with men.

IDU= injection drug users.

Figure 4. Estimated Median Survival in Months After AIDS by Half-Year of Diagnosis and Racial/Ethnic Group -- California, 1985-1994

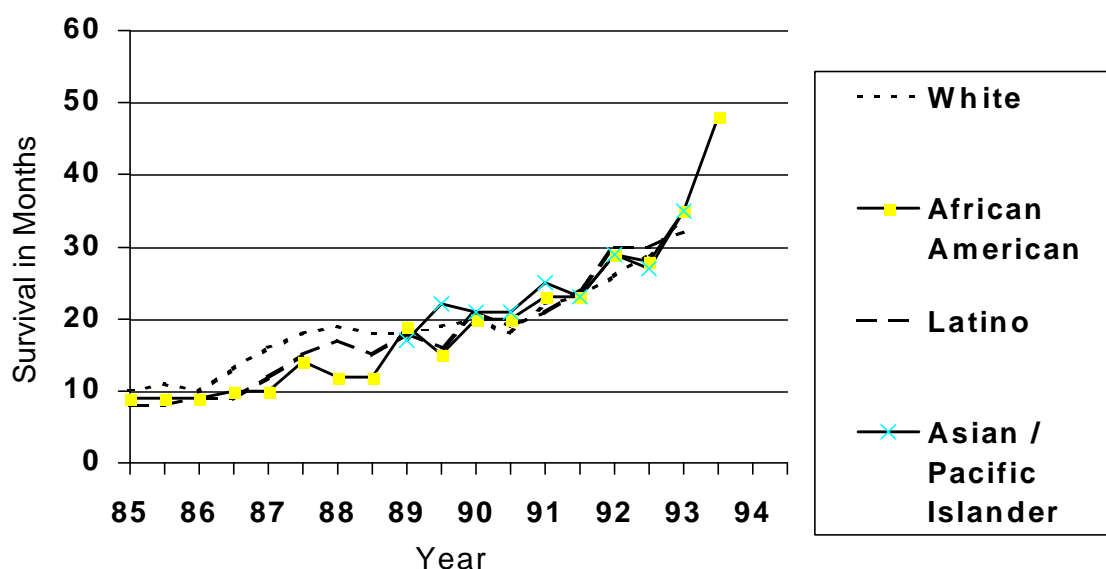


Figure 5. Estimated Median Survival in Months After AIDS by Half-Year of Diagnosis and Sex -- California, 1985-1994

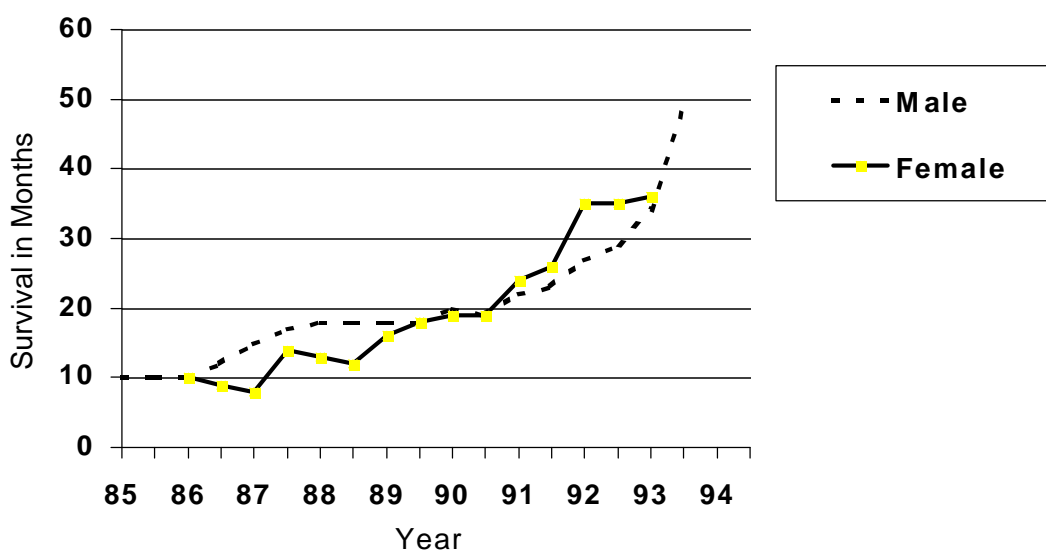


Table 1. AIDS cases by age group, exposure category, and gender reported April 1, 1996 through March 31, 1997 and April 1, 1997 through March 31, 1998; and cumulative totals by age group through March 31, 1998 in California.

Adult/adolescent Exposure Category	Male		Female		Totals		
	Apr. 1996- Mar. 1997 No. (%)	Apr. 1997- Mar. 1998 No. (%)	Apr. 1996- Mar. 1997 No. (%)	Apr. 1997- Mar. 1998 No. (%)	Apr. 1996- Mar. 1997 No. (%)	Apr. 1997- Mar. 1998 No. (%)	Cumulative Total No. (%)
Homosexual/bisexual	5,627 (73)	3,886 (68)	-- (--)	-- (--)	5,627 (66)	3,886 (61)	75,878 (72)
IDU (heterosexual)	794 (10)	635 (11)	309 (37)	212 (31)	1,103 (13)	847 (13)	10,299 (10)
Homosexual/bisexual IDU	613 (8)	398 (7)	-- (--)	-- (--)	613 (7)	398 (6)	9,065 (9)
Lesbian/bisexual IDU	-- (--)	-- (--)	9 (1)	6 (1)	9 (--)	6 (--)	120 (--)
Coagulation Disorders	26 (--)	28 (--)	-- (--)	1 (--)	26 (--)	29 (--)	531 (1)
Heterosexual	164 (2)	153 (3)	383 (46)	290 (43)	547 (6)	443 (7)	4,176 (4)
Blood transfusion	44 (1)	38 (1)	31 (4)	25 (4)	75 (1)	63 (1)	1,560 (1)
Other/undetermined	405 (5)	601 (10)	102 (12)	147 (22)	507 (6)	748 (12)	3,694 (4)
Subtotal	7,673 (100)	5,739 (100)	834 (100)	681 (100)	8,507 (100)	6,420 (100)	105,323 (100)
Pediatric (<13 years old) Exposure Category	Apr. 1996- Mar. 1997 No. (%)	Apr. 1997- Mar. 1998 No. (%)	Apr. 1996- Mar. 1997 No. (%)	Apr. 1997- Mar. 1998 No. (%)	Apr. 1996- Mar. 1997 No. (%)	Apr. 1997- Mar. 1998 No. (%)	Cumulative Total No. (%)
Coagulation Disorders	1 (5)	-- (--)	-- (--)	-- (--)	1 (3)	-- (--)	29 (5)
Blood transfusion	-- (--)	-- (--)	1 (6)	-- (--)	1 (3)	-- (--)	111 (20)
Mother at risk: --IDU	2 (11)	6 (33)	1 (6)	1 (14)	3 (8)	7 (28)	148 (26)
--Sex with IDU	3 (16)	1 (6)	3 (18)	-- (--)	6 (17)	1 (4)	77 (14)
--Sex w/bisexual male	1 (5)	-- (--)	2 (12)	-- (--)	3 (8)	-- (--)	26 (5)
--Sex w/HIV infected	2 (11)	3 (17)	5 (29)	3 (43)	7 (19)	6 (24)	67 (12)
--Blood transfusion	-- (--)	3 (17)	1 (6)	-- (--)	1 (3)	3 (12)	22 (4)
--HIV infected	9 (47)	4 (22)	4 (24)	3 (43)	13 (36)	7 (28)	74 (13)
Other/undetermined	1 (5)	1 (6)	-- (--)	-- (--)	1 (3)	1 (4)	8 (1)
Subtotal	19 (100)	18 (100)	17 (100)	7 (100)	36 (100)	25 (100)	562 (100)
TOTAL	7,692	5,757	851	688	8,543	6,445	105,885

Table 2. AIDS cases by age group, exposure category, and race/ethnicity reported through March 31, 1998 in California.

Adult/adolescent Exposure Category	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
Homosexual/bisexual	52,117 (79)	8,746 (51)	13,070 (66)	1,573 (74)	254 (58)	118 (75)	75,878 (72)
IDU (heterosexual)	3,855 (6)	4,194 (24)	2,078 (11)	91 (4)	65 (15)	16 (10)	10,299 (10)
Homosexual/bisexual IDU	5,858 (9)	1,687 (10)	1,357 (7)	76 (4)	82 (19)	5 (3)	9,065 (9)
Lesbian/bisexual IDU	52 (--)	42 (--)	21 (--)	1 (--)	4 (1)	-- (--)	120 (--)
Coagulation Disorders	361 (1)	42 (--)	100 (1)	23 (1)	1 (--)	4 (3)	531 (1)
Heterosexual	1,519 (2)	1,303 (8)	1,201 (6)	134 (6)	17 (4)	2 (1)	4,176 (4)
Blood transfusion	906 (1)	175 (1)	363 (2)	109 (5)	3 (1)	4 (3)	1,560 (1)
Other/undetermined	1,046 (2)	1,050 (6)	1,469 (7)	107 (5)	14 (3)	8 (5)	3,694 (4)
Subtotal	65,714 (100)	17,239 (100)	19,659 (100)	2,114 (100)	440 (100)	157 (100)	105,323 (100)
Pediatric (<13 years old) Exposure Category	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
Coagulation Disorders	15 (9)	1 (1)	11 (5)	2 (13)	-- (--)	-- (--)	29 (5)
Blood transfusion	42 (26)	23 (13)	39 (19)	7 (47)	-- (--)	-- (--)	111 (20)
Mother at risk: --IDU	50 (31)	69 (40)	25 (12)	-- (--)	4 (80)	-- (--)	148 (26)
--sex with IDU	18 (11)	20 (11)	37 (18)	1 (7)	1 (20)	-- (--)	77 (14)
--sex with bisexual male	8 (5)	4 (2)	13 (6)	1 (7)	-- (--)	-- (--)	26 (5)
--sex w/HIV infected	9 (6)	13 (7)	41 (20)	3 (20)	-- (--)	1 (100)	67 (12)
--blood transfusion	7 (4)	3 (2)	12 (6)	-- (--)	-- (--)	-- (--)	22 (4)
--HIV infected	11 (7)	39 (22)	23 (11)	1 (7)	-- (--)	-- (--)	74 (13)
Other/undetermined	1 (1)	2 (1)	5 (2)	-- (--)	-- (--)	-- (--)	8 (1)
Subtotal	161 (100)	174 (100)	206 (100)	15 (100)	5 (100)	1 (100)	562 (100)
TOTAL	65,875	17,413	19,864	2,129	445	158	105,885

Table 3. Adult/adolescent AIDS cases by gender, exposure category, and race/ethnicity, reported through March 31, 1998 in California.

Male Exposure Category	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
Homosexual/bisexual	52,117 (83)	8,746 (59)	13,070 (72)	1,573 (82)	254 (64)	118 (78)	75,878.0 (77)
IDU (heterosexual)	2,861 (5)	3,014 (20)	1,716 (10)	61 (3)	41 (10)	11 (7)	7,704 (8)
Homosexual/bisexual IDU	5,858 (9)	1,687 (11)	1,357 (8)	76 (4)	82 (21)	5 (3)	9,065 (9)
Coagulation Disorders	347 (1)	40 (--)	98 (1)	23 (1)	1 (--)	4 (3)	513 (1)
Heterosexual	417 (1)	397 (3)	377 (2)	29 (2)	5 (1)	2 (1)	1,227 (1)
Blood transfusion	582 (1)	84 (1)	173 (1)	61 (3)	2 (1)	3 (2)	905 (1)
Other/undetermined	875 (1)	800 (5)	1,273 (7)	85 (4)	10 (3)	8 (5)	3,051 (3)
Subtotal	63,057 (100)	14,768 (100)	18,064 (100)	1,908 (100)	395 (100)	151 (100)	98,343 (100)
Female Exposure Category	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
IDU	994 (37)	1,180 (48)	362 (23)	30 (15)	24 (53)	5 (83)	2,595 (37)
Lesbian/bisexual IDU	52 (2)	42 (2)	21 (1)	1 (--)	4 (9)	-- (--)	120 (2)
Coagulation Disorders	14 (1)	2 (--)	2 (--)	-- (--)	-- (--)	-- (--)	18 (--)
Heterosexual	1,102 (41)	906 (37)	824 (52)	105 (51)	12 (27)	-- (--)	2,949 (42)
Blood transfusion	324 (12)	91 (4)	190 (12)	48 (23)	1 (2)	1 (17)	655 (9)
Other/undetermined	171 (6)	250 (10)	195 (12)	22 (11)	4 (9)	-- (--)	643 (9)
Subtotal	2,657 (100)	2,471 (100)	1,595 (100)	206 (100)	45 (100)	6 (100)	6,980 (100)
TOTAL	65,714	17,239	19,659	2,114	440	157	105,323

Table 4. AIDS cases in adolescents and adults under age 25, by exposure category reported April 1, 1996 through March 31, 1997 and April 1, 1997 through March 31, 1998; and cumulative totals by age group through March 31, 1998 in California.

Exposure Category	13-19 years old			20-24 years old		
	Apr. 1996- Mar. 1996 No. (%)	Apr. 1997- Mar. 1998 No. (%)	Cumulative Total No. (%)	Apr. 1996- Mar. 1996 No. (%)	Apr. 1997- Mar. 1998 No. (%)	Cumulative Total No. (%)
Homosexual/bisexual	14 (45)	8 (26)	95 (31)	142 (62)	96 (54)	1,880 (61)
IDU (heterosexual)	-- (--)	2 (6)	11 (4)	22 (10)	20 (11)	298 (10)
Homosexual/bisexual IDU	-- (--)	5 (16)	15 (5)	13 (6)	8 (5)	359 (12)
Lesbian/bisexual IDU	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	5 (--)
Coagulation Disorders	5 (16)	3 (10)	76 (25)	3 (1)	2 (1)	64 (2)
Heterosexual	3 (10)	2 (6)	40 (13)	27 (12)	19 (11)	272 (9)
Blood transfusion	5 (16)	7 (23)	45 (15)	2 (1)	1 (1)	37 (1)
Other/undetermined	4 (13)	4 (13)	21 (7)	20 (9)	31 (18)	155 (5)
TOTAL	31 (100)	31 (100)	303 (100)	229 (100)	177 (100)	3,070 (100)

Table 5. AIDS cases by gender, age at diagnosis, and race/ethnicity, reported through March 31, 1998 in California.

Male Age at Diagnosis-- Years	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
0-4	47 (--)	64 (--)	71 (--)	4 (--)	2 (1)	-- (--)	188 (--)
5-12	38 (--)	29 (--)	38 (--)	4 (--)	-- (--)	-- (--)	109 (--)
13-19	75 (--)	36 (--)	104 (1)	9 (--)	2 (1)	-- (--)	226 (--)
20-24	1,253 (2)	438 (3)	887 (5)	60 (3)	14 (4)	5 (3)	2,657 (3)
25-29	6,939 (11)	1,938 (13)	3,342 (18)	244 (13)	77 (19)	21 (14)	12,561 (13)
30-34	13,956 (22)	3,391 (23)	4,661 (26)	413 (22)	107 (27)	31 (21)	22,559 (23)
35-39	14,481 (23)	3,395 (23)	3,779 (21)	427 (22)	95 (24)	36 (24)	22,213 (23)
40-44	11,182 (18)	2,530 (17)	2,450 (13)	353 (18)	51 (13)	26 (17)	16,592 (17)
45-49	7,045 (11)	1,479 (10)	1,290 (7)	202 (11)	25 (6)	13 (9)	10,054 (10)
50-54	3,912 (6)	787 (5)	731 (4)	83 (4)	10 (3)	7 (5)	5,530 (6)
55-59	2,157 (3)	413 (3)	427 (2)	61 (3)	9 (2)	7 (5)	3,074 (3)
60-64	1,165 (2)	213 (1)	225 (1)	28 (1)	3 (1)	2 (1)	1,636 (2)
65 or older	892 (1)	148 (1)	168 (1)	28 (1)	2 (1)	3 (2)	1,241 (1)
Subtotal	63,142 (100)	14,861 (100)	18,173 (100)	1,916 (100)	397 (100)	151 (100)	98,640 (100)
Female Age at Diagnosis-- Years	White No. (%)	Black No. (%)	Hispanic No. (%)	Asian/ Pacific Is. No. (%)	Native American No. (%)	Not Specified No. (%)	TOTAL No. (%)
0-4	51 (2)	65 (3)	77 (5)	4 (2)	3 (6)	1 (14)	201 (3)
5-12	25 (1)	16 (1)	20 (1)	3 (1)	-- (--)	-- (--)	64 (1)
13-19	22 (1)	23 (1)	28 (2)	4 (2)	-- (--)	-- (--)	77 (1)
20-24	136 (5)	125 (5)	142 (8)	7 (3)	3 (6)	-- (--)	413 (6)
25-29	395 (14)	335 (13)	307 (18)	33 (15)	8 (17)	-- (--)	1,078 (15)
30-34	575 (21)	505 (20)	328 (19)	26 (12)	12 (25)	2 (29)	1,448 (20)
35-39	481 (18)	562 (22)	289 (17)	45 (21)	8 (17)	1 (14)	1,386 (19)
40-44	377 (14)	424 (17)	197 (12)	23 (11)	5 (10)	1 (14)	1,027 (14)
45-49	245 (9)	253 (10)	107 (6)	27 (13)	3 (6)	1 (14)	636 (9)
50-54	128 (5)	102 (4)	74 (4)	13 (6)	4 (8)	-- (--)	321 (4)
55-59	73 (3)	72 (3)	57 (3)	11 (5)	1 (2)	-- (--)	214 (3)
60-64	67 (2)	33 (1)	36 (2)	6 (3)	-- (--)	-- (--)	142 (2)
65 or older	158 (6)	37 (1)	30 (2)	11 (5)	1 (2)	1 (14)	238 (3)
Subtotal	2,733 (100)	2,552 (100)	1,692 (100)	213 (100)	48 (100)	7 (100)	7,245 (100)
TOTAL	65,875	17,413	19,865	2,129	445	158	105,885

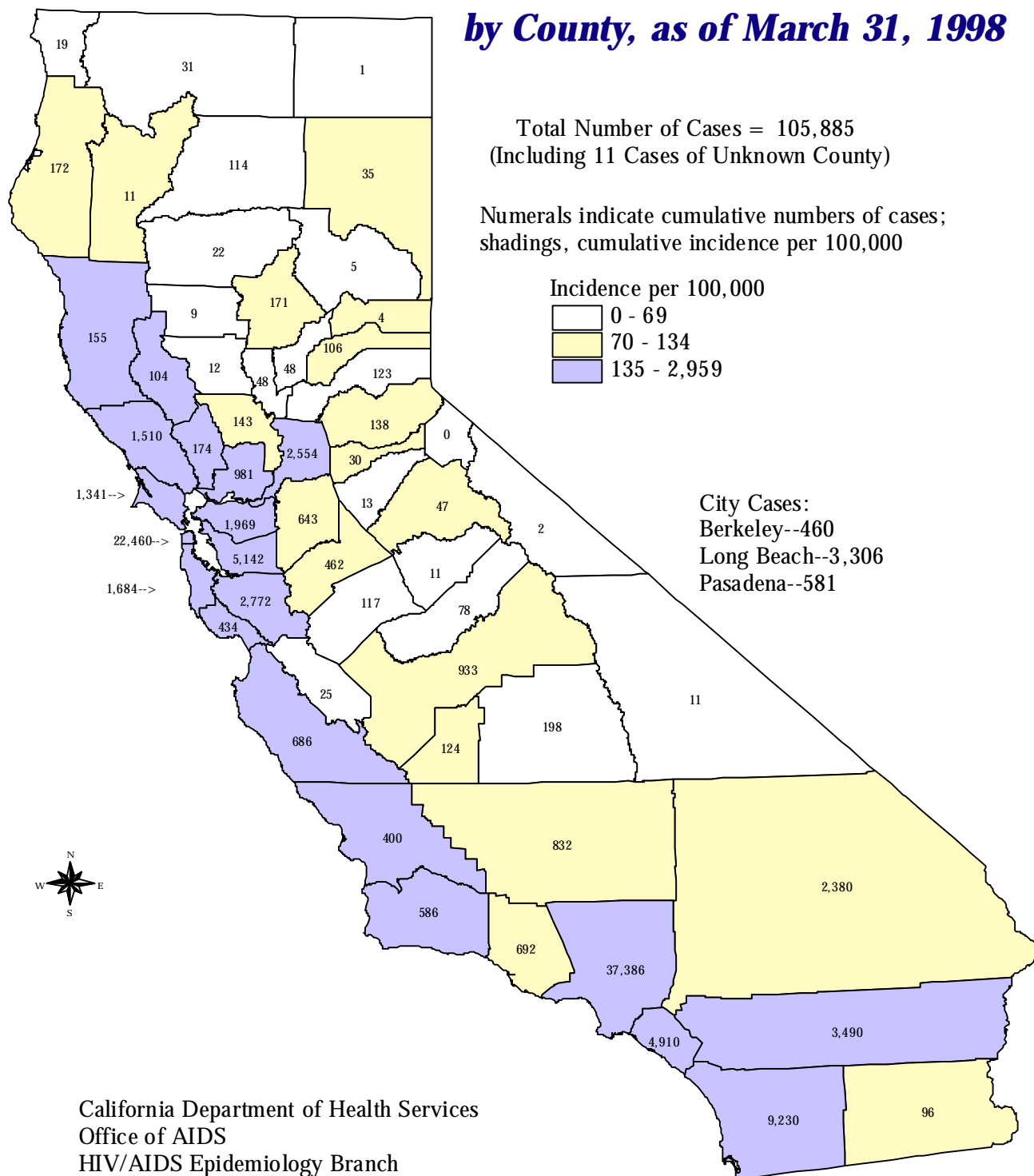
Table 6. AIDS cases, deaths, and case-fatality rates by half-year of diagnosis through March 31, 1998 in California.

Half-Year of Diagnosis	Number of Cases	Number of Deaths	Case Fatality Rate
Before 1983	305	290	95%
1983 Jan-June	297	287	97%
July-Dec	412	395	96%
1984 Jan-June	592	573	97%
July-Dec	812	780	96%
1985 Jan-June	1,160	1,120	97%
July-Dec	1,421	1,366	96%
1986 Jan-June	1,834	1,772	97%
July-Dec	2,230	2,131	96%
1987 Jan-June	2,754	2,630	95%
July-Dec	2,887	2,714	94%
1988 Jan-June	3,255	3,045	94%
July-Dec	3,373	3,090	92%
1989 Jan-June	3,979	3,571	90%
July-Dec	3,947	3,493	88%
1990 Jan-June	4,507	3,873	86%
July-Dec	4,447	3,774	85%
1991 Jan-June	5,281	4,299	81%
July-Dec	6,078	4,752	78%
1992 Jan-June	6,512	4,659	72%
July-Dec	6,412	4,262	66%
1993 Jan-June	6,320	3,707	59%
July-Dec	5,578	2,782	50%
1994 Jan-June	5,476	2,300	42%
July-Dec	4,772	1,616	34%
1995 Jan-June	4,965	1,258	25%
July-Dec	4,235	840	20%
1996 Jan-June	3,963	606	15%
July-Dec	3,036	367	12%
1997 Jan-June	2,693	248	9%
July-Dec	1,998	155	8%
1998 Jan-Mar	353	10	3%
TOTAL	105,884	66,765	63%

Table 7. AIDS Cases and Cumulative Incidence 1981 through March 31, 1998 in California.

COUNTY	AIDS Cases	Deaths	Case Fatality Rate (%)	Incidence per 100,000	COUNTY	AIDS Cases	Deaths	Case Fatality Rate (%)	Incidence per 100,000
Alameda	5,142	3,245	63.1%	369.10	Orange	4,910	2,760	56.2%	181.00
Berkeley	490	328	66.9%	467.11	Placer	123	68	55.3%	56.31
Alpine	0	0	0.0%	0.00	Plumas	5	3	60.0%	22.91
Amador	30	17	56.7%	90.33	Riverside	3,490	1,847	52.9%	224.95
Butte	171	115	67.3%	83.89	Sacramento	2,554	1,629	63.8%	210.02
Calaveras	13	7	53.8%	29.70	San Benito	25	11	44.0%	56.37
Colusa	12	11	91.7%	62.38	San Bernardino	2,380	1,372	57.6%	133.75
Contra Costa	1,969	1,274	64.7%	216.47	San Diego	9,230	5,496	59.5%	338.59
Del Norte	19	10	52.6%	61.57	San Francisco	22,460	15,413	68.6%	2,959.25
El Dorado	138	88	63.8%	87.65	San Joaquin	643	398	61.9%	114.50
Fresno	933	592	63.5%	112.73	San Luis Obispo	400	190	47.5%	172.96
Glenn	9	6	66.7%	31.57	San Mateo	1,684	1,073	63.7%	236.85
Humboldt	172	103	59.9%	130.68	Santa Barbara	586	418	71.3%	147.26
Imperial	96	47	49.0%	71.66	Santa Clara	2,772	1,666	60.1%	170.08
Inyo	11	7	63.6%	56.38	Santa Cruz	434	267	61.5%	180.11
Kern	832	409	49.2%	122.41	Shasta	114	85	74.6%	64.13
Kings	124	56	45.2%	109.78	Sierra	4	4	100.0%	119.40
Lake	104	55	52.9%	169.38	Siskiyou	31	16	51.6%	66.01
Lassen	35	13	37.1%	130.33	Solano	981	550	56.1%	236.22
Los Angeles	37,386	23,935	64.0%	387.96	Sonoma	1,510	955	63.2%	343.10
Long Beach	3,306	2,073	62.7%	755.14	Stanislaus	462	276	59.7%	102.02
Pasadena	581	379	65.2%	432.29	Sutter	48	28	58.3%	60.44
Madera	78	43	55.1%	69.18	Tehama	22	11	50.0%	37.35
Marin	1,341	714	53.2%	555.59	Trinity	11	8	72.7%	77.64
Mariposa	11	3	27.3%	61.81	Tulare	198	140	70.7%	52.24
Mendocino	155	106	68.4%	170.82	Tuolumne	47	30	63.8%	83.87
Merced	117	70	59.8%	54.56	Ventura	692	441	63.7%	93.95
Modoc	1	1	100.0%	9.23	Yolo	143	88	61.5%	90.09
Mono	2	1	50.0%	18.48	Yuba	48	29	60.4%	68.79
Monterey	686	393	57.3%	180.30	Unknown	11	5	45.5%	
Napa	174	108	62.1%	144.33					
Nevada	106	59	55.7%	110.07	TOTAL	105,885	66,765	63.1%	314.78

Cumulative AIDS Cases in California by County, as of March 31, 1998



MEETINGS/ANNOUNCEMENTS

September 11, 1998 Latino HIV/AIDS Conference: "Our Pueblo United Against the Epidemic" (Conferencia Latino/a de VIH/SIDA: "Nuestro Pueblo unido contra La Epidemia de VIH"), Marriott Hotel, Ontario, CA. Sponsored by the Inland AIDS Project; co-sponsored by Bienestar and the Desert AIDS Project. For more information and registration materials, contact the Latino Conference Coordinator, 909-784-2437.

September 16 - 20, 1998 Atlanta, Georgia. The Third National HIV/AIDS Housing Conference "**New Strategies for a Changing Environment.**" The conference consists of panels, plenary sessions, technical assistance workshops, and presentations.
Contact *Jennifer Harris*, Conference Registrar, (206) 448-5242 x3424.

November 15-19, 1998 American Public Health Association Annual Meeting, Washington, DC. Topics range from AIDS to mental health, and from maternal and child health to social work.
Contact Anna Keller at anna.keller@apha.org, or (202) 789-5670.

July 15 - 18, 1999 "AIDS Impact 1999" focuses on the inter-connected biological, psychological and social aspects of HIV. The conference is an excellent opportunity for people living with HIV, researchers, health care practitioners and others to explore changing trends in the HIV epidemic throughout the world.
Ottawa, Canada
Dr John Service (Ottawa) Executive Director
Canadian Psychological Association
Internet: <http://www.cpa.ca>

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